

The National Research Council's Space Science/Studies Board and NASA's Planetary Science Program

Dwayne Day
Aeronautics and Space Engineering Board
National Research Council

The SSB and Planetary Science



Space Science Board

- Created in summer 1958, before NASA
- Grew out of National Academy of Sciences' involvement in the IGY



The National Academy of Sciences Building, January 1958

Space Science Board

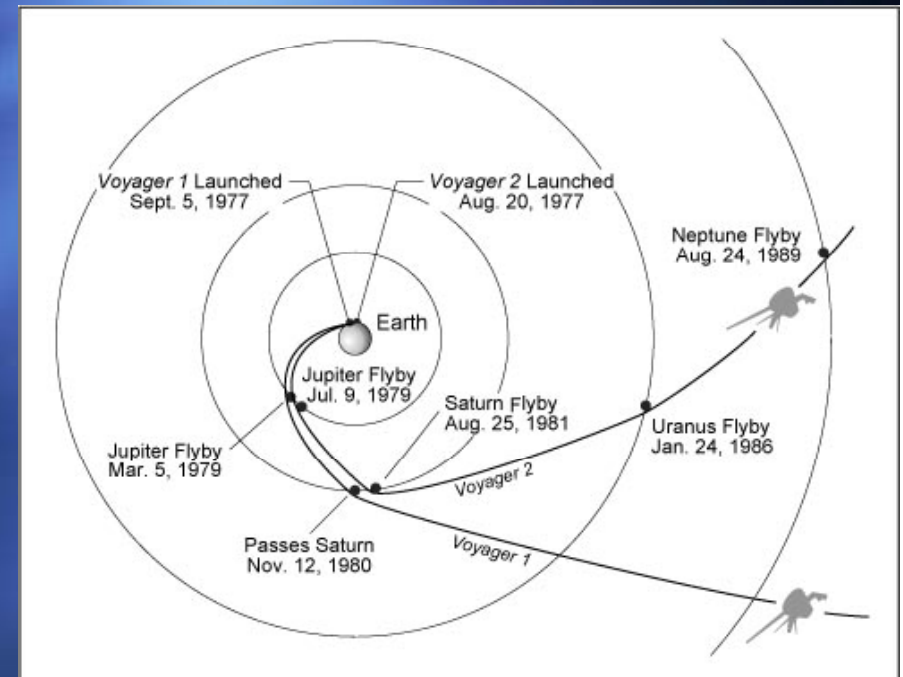
- Committee 1 Geochemistry of Space and Exploration of Moon and Planets, 1958-1970
- Committee on Planetary and Lunar Exploration (COMPLEX) 1971-2011
- Committee on Planetary Biology and Chemical Evolution, 1979-1988
- Committee on the Origins and Evolution of Life (COEL), 1994-2011
- Committee on Planetary and Astrobiology Science (CAPS) 2012-today

Scientist-Astronaut Decision

- *A Review of Space Research*, 1962 SSB report strongly advocated the inclusion of “scientist-astronauts” in the NASA human exploration program
- 1964 NAS review board recommended 16 candidate astronauts
- Scientist-astronauts selected by NASA
 - NASA already had more astronauts than it needed, and cancellation of Apollo Applications Program made many of them unneeded
- Harrison Schmitt assigned to Apollo 18, moved to Apollo 17 when 18 was canceled

The Grand Tour

- *Priorities for Space Research: 1971-1980*, 1970 SSB summer study did not recommend the Grand Tour mission *unless* NASA science received maximum amount of funding
- NASA chose to pursue it anyway
- Mission soon canceled. Too expensive, insufficient scientific support
 - Quickly revived as the less-ambitious Voyager 1&2



Benefits of the NRC-NASA Relationship

- The legitimization of the planetary science program in the eyes of Congress, the White House, and the public.
- Increased overall efficiency, by decreasing the likelihood that NASA will produce planetary science missions that do not return scientifically useful data, and by establishing clearer goals for planetary programs than NASA would have produced on its own.
- Assisted in the establishment of planetary science as a legitimate scientific discipline rather than as a subset of geology or astrophysics.
- Increased stability over long periods of time by producing a consistent message about planetary science goals.
- Creation of a single place for advice and coordination across the scientific disciplines (for example, regarding exoplanets).
- Creation of an honest broker in the establishment of planetary science goals, a broker not tied to any single NASA center, university, institution, or geographic location.
- Better ties between the dispersed science community and the agency.
- Better science.

